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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,928	08/04/2003	Keigo Maki	P/2850-81	4958

7590 01/17/2006

Attention: Robert C. Faber  
OSTROLENK, FABER, GERB & SOFFEN  
1180 Avenue of the Americas  
New York, NY 10036-8403

EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/633,928

Applicant(s)

MAKI, KEIGO

Examiner

Sylvia R. MacArthur

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 3-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of Maki (US 6,689,984) in view of Hiroshi (JP 200131331) and Harada et al (US 6,771,483).

Regarding claims 1 and 3:

Maki claims a susceptor (susceptor device) with a built-in electrode (inner electrode), comprising a power supply (electricity supplying) terminal making contact with the susceptor. An insulating layer covers the inner electrode and connects the inner electrode and the power supply terminal. The patent fails to claim a) the temperature controlling section b) the layer was formed via spraying, and c) the dimensions of the insulation layer discussed in the claims.

Hiroshi teaches a ceramic base body 3, an inner electrode 7, an electricity supply terminal (see abstract), an insulating sprayed layer (6), a temperature control part (temperature controlling section)2, the temperature control part 2 and the insulating layer 6 are connected by a buffer

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layer (bonding agent layer) 4. The base body and temperature control part 2 are formed unitarily. Figure 1 illustrates that the temperature controlling section is disposed beneath the insulating sprayed layer and has flow paths (10) inside the controlling section to circulate the medium.

The motivation to modify the apparatus of Maki to incorporate the temperature controlling section of Hiroshi is to provide better control of substrate holder temperature and thus better control of the substrate temperature. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to modify the susceptor of Maki to provide the temperature controlling section of Hiroshi.

Hiroshi fails to teach that the layer is formed by spraying and further fails to teach the dimensions of the insulating layer.

Hirada et al teaches an electrostatic chuck with an inner electrode 4 and insulating layers 3,4 cover the electrode. Col. 3 lines 25-33 teach that the spray-coated layers have thickness of 30-300 microns.

The motivation to provide the apparatus of Maki modified by Hiroshi with the teachings of Hirada to form the insulating layers by spraying and to provide the layers at a thickness within the range of 20 to 500 microns is that this provides high productivity and good coating adhesion property as cited in col.3 lines 4-11 of Hirada et al. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide the insulating coating by using a spraying method to achieve a thickness within the range of 20 to 500 microns. Further the claimed dimensions stand to keep the inner electrode protected from the temperature control part and the heat exchange that is subject to occur with the electricity supply. Furthermore, the

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limitation wherein the layer is constructed by spraying is a product-by-process claim and is not given patentable weight.

Regarding claim 4: Figures 1-5 of Hiroshi illustrate this claim.

Regarding claim 5: Plasma spraying is among the specific types of spray coating cited in col.3 lines 60-67 of Hirada et al. Also, note that the specific type of spraying is seen as a product by process claim and is not given patentable weight.

Regarding claim 6: Hirada et al teaches that the spray coating is formed of alumina see col.3 lines 19-33 of Hirada et al.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi in view of Hirada et al.

Hiroshi teaches a ceramic base body 3, an inner electrode 7, an electricity supply terminal (see abstract), an insulating sprayed layer (6), a temperature control part 2, the temperature control part 2 and the insulating layer 6 are connected by a bonding agent layer 4. The base body and temperature control part 2 are formed unitarily, see Fig.1

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Regarding the insulating layer being formed by spray or specifically a plasma jet method, this is a matter of a product by process limitation and is not given patentable weight. The layer is obviously capable of being formed by spray or specifically a plasma jet method.

Regarding claims 1 and 3: Hiroshi fails to teach that the layer is formed by spraying and further fails to teach the dimensions of the insulating layer.

Hirada et al teaches an electrostatic chuck with an inner electrode 4 and insulating layers 3,4 cover the electrode. Col. 3 lines 25-33 teach that the spray-coated layers have thickness of 30-300 microns.

The motivation to provide the apparatus of Hiroshi modified by Hirada to form the insulating layers by spraying and to provide the layers at a thickness within the range of 20 to 500 microns is that this provides high productivity and good coating adhesion property as cited in col.3 lines 4-11 of Hirada et al. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide the insulating coating by using a spraying method to achieve a thickness within the range of 20 to 500 microns. Furthermore, the limitation wherein the layer is constructed by spraying is a product-by-process claim and is not given patentable weight.

Regarding claim 4: Figures 1-5 of Hiroshi illustrate this claim.

Regarding claim 5: Plasma spraying is among the specific types of spray coating cited in col.3 lines 60-67 of Hirada et al. Also, note that this claimed is seen as a product by process claim and is not given patentable weight.

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Regarding claim 6: Hirada et al teaches that the spray coating is formed of alumina see col.3 lines 19-33 of Hirada et al.

### ***Response to Arguments***

5. Applicant's arguments filed 10/15/2005 have been fully considered but they are not persuasive.

First the double patenting rejections stand as stated above. The prior art by Maki fails to teach a-c (as recited above). The prior art by Hiroshi and Hirada et al were introduced to teach those limitations not taught in Maki. Namely Hiroshi teaches the temperature controlling section with a flow path and Hirada teaches alumina as a material of construction, the layer is formed by spraying and further teaches dimensions of the insulation layer within the dimensions claimed in the present invention.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the core hours of 9 a.m. and 3 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sylvia R MacArthur  
Patent Examiner  
Art Unit 1763

January 9, 2006

  
**PARVIZ HASSANZADEH**  
**SUPERVISORY PATENT EXAMINER**